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FWI 2014 WORKSTATIONS

FWI 2014 WORKSTATION CONFIGURATIONS

Dell OptiPlex 9020 AIO 23"

The OptiPlex 9020 is an all-in-one (AIO) desktop workstation with the CPU and a 23-inch wide monitor built together as one entity. The machine will come with the Microsoft Windows 7 64-bit Operating System.

Highlights

- Quad core processor for data processing intensive activities
- 8GB of RAM for memory intensive activities
- 1TB hard drive for large storage needs
- Built-in camera for video calls and Blackboard Collaborate sessions
- 23 inch Integrated WLED Full HD All-in-One Display
- Less clutter due to all-in-one design

Technical Specifications	DELL OPTIPLEX 9020 AIO
Operating System	Windows 7 64-bit
Processor	4th Generation Intel Quad Core i7-4770S Processor (Quad Core HT, 3.10GHz Turbo, 8MB, w/ HD Graphics 4600)
Memory	8GB (1x8GB) 1600 MHz DDR3L Memory
Hard Disk	1TB 3.5inch Serial ATA (7.200 RPM) Hard Disk Drive
Optical Drive	8X Slimline DVD+/-RW Drive
Audio	Internal Dell audio speaker
Video Card	Integrated Intel HD Graphics 4600 video card
Monitor	23-inch Integrated WLED Full HD Standard Non Touch Screen (1920 x 1080)
Warranty	3 Year ProSupport w/3 Year NBD Limited Onsite Service After Remote Diagnostic
Expansion Slots & Ports	1 miniPCIe connector, 4 External USB 3.0 ports[#], 4 External USB 2.0 ports; 1 RJ-45; 1 VGA; 1 HDMI; 2 PS/2, 1 Line-in, 2 Line-out
Wireless	Intel® Wireless 6235 half mini-PCI3 WLAN
Mouse	Dell MS111 USB Optical Mouse
Keyboard	US English (QWERTY) Dell KB212-B QuietKey USB Keyboard Black
Bluetooth	Built-in Intel® Wireless Bluetooth

AC Adapter	200W up to 90% Efficient PSU; ENERGY STAR 5.2 qualified, Active PFC
Camera/Microphone	Fixed 2.0 MP webcam with sliding door

Apple iMac 21.5"

The Apple iMac is an all-in-one desktop workstation with the CPU and monitor built together as one entity. The machine will come with the Mac OS X Mavericks Operating System.

Highlights

- Quad core processor for data processing intensive activities
- 1TB hard drive for large storage needs
- Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions
- iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation
- 21.5 inch widescreen
- Less clutter and weight due to all-in-one and thin design

Trade-offs

- No internal optical drive. An external drive will **NOT** be provided

Technical Specifications	APPLE iMac 21.5"
Operating System	Mac OS X Mavericks
Processor	2.7GHz Quad core Intel Core i5 Processor, (Turbo Boost up to 3.2GHz w/4MB L3 cache)
Memory	8GB 1600MHz DDR3 SDRAM - 2X4GB
Hard Disk	1TB Serial ATA Drive @ 5400 rpm
Optical Drive	NONE$^\Delta$
Audio	Built-in stereo speakers
Video Card	Intel Iris Pro Graphics
Monitor	21.5" (diagonal) LED-backlit display with IPS technology; (1920x1080)
Warranty	3 Year AppleCare Protection Plan
Expansion Slots & Ports	2 thunderbolt ports (up to 10Gbps), Mini DisplayPort, 4 USB 3.0 ports[#], SDXC card slot, RJ-45 connector, Kensington lock slot
Wireless	Built-in 802.11ac Wi-Fi wireless networking
Mouse	Apple Magic Mouse, Wireless
Keyboard	Apple Keyboard with Numeric Keypad (English) & User's Guide
Bluetooth	Bluetooth 4.0 wireless technology
AC Adapter	100-240V AC

Camera/Microphone	Built-in FaceTime HD camera & dual microphones

Dell Latitude E7440 14.0"

The Dell Latitude E7440 laptop is a portable device. The machine will come with the Microsoft Windows 7 64-bit Operating System.

Highlights

- Portable—can be brought to the classroom and plugged in to the audiovisual system (weighs 3.6lbs)
- 8GB of RAM for memory intensive activities
- 256GB Mobility Solid State Drive for high speed demanding operations
- Integrated light sensitive camera for video calls and Blackboard Collaborate sessions

Trade-offs

- No internal optical drive. An external drive will **NOT** be provided

Technical Specifications	DELL LATITUDE E7440 14"
Operating System	Windows 7 64-bit
Processor	4th Generation Intel Core i5-4300U Processor (1.9GHz, 3MB cache)
Memory	8GB (1x8GB) 1600MHz DDR3L Memory
Hard Disk	256GB Mobility Solid State Drive
Optical Drive	NONE$^\Delta$
Audio	Internal Dell audio speaker
Video Card	Integrated Intel HD Graphics 4400 video card
Monitor	14.0 inch HD Wide View Anti-Glare WLED-backlit Screen (1920x1080)
Warranty	3 Year ProSupport w/3 Year NBD Limited Onsite Service After Remote Diagnostic
Expansion Slots & Ports	Network connector (RJ-45), 3 USB 3.0 ports[#], Stereo headphone/Microphone combo jack, Docking connector, mDisplayPort, HDMI, 1 Full and 1 Half Mini Card Slots
Wireless	Intel® Dual Back Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0LE Half Mini Card
Mouse	Multi-touch Touchpad
Keyboard	Internal English Dual Pointing Keyboard
Bluetooth	Built-in Intel Wireless Bluetooth 4.0LE
Battery	3-cell (34Whr) Lithium Ion battery with ExpressCharge

AC Adapter	65W AC Adapter, 3-pin
Camera/Microphone	Integrated Light Sensitive webcam & noise cancelling digital array microphone
Accessories	• Dell Mainstream Slip Case - 14.0 inch • Dell mini-DP to VGA Adapter
Weight	3.6lbs

Apple MacBook Pro 13.3"

The MacBook Pro laptop is a portable device. The machine will come with the Mac OS X Mavericks Operating System.

Highlights

- Portable—can be brought to the classroom and plugged in to the audiovisual system using the included Mini DisplayPort to VGA Adapter (weighs 3.46lbs)
- 256GB PCIe-based Flash Storage for high speed demanding operations
- Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions
- iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation

Trade-offs

- No internal optical drive. An external drive will **NOT** be provided
- No internal network port. A USB Ethernet adapter will be included

Technical Specifications	APPLE MACBOOK PRO 13"
Operating System	Mac OS X Mavericks
Processor	2.4GHz Dual core Intel Core i5 Processor (Turbo Boost up to 2.9GHz w/3MB shared L3 cache)
Memory	8GB 1600MHz DDR3L SDRAM
Hard Disk	256GB PCIe-based Flash Storage
Optical Drive	NONE$^\Delta$
Audio	Built-in Stereo speakers
Video Card	Intel Iris Graphics
Monitor	Retina display: 13.3" (diagonal) LED-backlit display with IPS technology; (2560x1600)
Warranty	3 Year AppleCare Protection Plan
Expansion Slots & Ports	2 thunderbolt ports (up to 20Gbps), 2 USB 3 ports[#] (up to 5Gbps), HDMI port, Headphone port, SDXC card slot, MagSafe 2 Power Port
Wireless	Built-in 802.11ac Wi-Fi wireless networking
Mouse	Multi-Touch Track pad
Keyboard	Built-in Full-size Backlit Keyboard, English
Bluetooth	Bluetooth 4.0 wireless technology
Battery	Built-in 71.8-watt-hour Lithium-Polymer Battery (up to 9 hours of wireless web)

AC Adapter	60W MagSafe 2 Power Adapter
Camera/Microphone	Built-in 720p FaceTime HD camera & dual microphone
Accessories	• Incase 13" Neoprene Pro Sleeve for MacBook Pro • Mini DisplayPort to VGA Adapter • Apple Thunderbolt to Gigabit Ethernet Adapter
Weight	3.46lbs

Dell Latitude E7240 12.5"

The Dell E7240 laptop is an ultra-light, portable device. The machine will come with the Microsoft Windows 7 64-bit Operating System.

Highlights

- Ultralight—can be brought to the classroom and plugged in to the audiovisual system using the included Dell Mini DisplayPort to VGA Adapter (weighs 2.99lbs)
- Ultrathin design features a 12.5" HD display cleverly fit into a footprint that's similar to an 11" laptop, and it is beneficial for frequent travelers
- 256GB Mobility Solid State Drive for high speed demanding operations
- Built-in camera and microphone for video calls and Blackboard Collaborate sessions

Trade-offs

- No internal optical drive. An external drive will **NOT** be provided

Technical Specifications	DELL LATITUDE E7240 12"
Operating System	Windows 7 64-bit
Processor	4th Generation Intel Core i5-4300U Processor (1.9GHz, 3MB cache)
Memory	8GB (2x4GB) 1600MHz DDR3L Memory
Hard Disk	256GB Mobility Solid State Drive
Optical Drive	NONE$^\Delta$
Audio	Internal Dell audio speaker
Video Card	Integrated Intel HD Graphics 4400 video card
Monitor	12.5 inch HD Anti-Glare WLED-backlit Screen (1366x768)
Warranty	3 Year ProSupport w/3 Year NBD Limited Onsite Service After Remote Diagnostic
Expansion Slots & Ports	3 USB 3.0 ports[#], Network connector (RJ-45), Docking connector, mDisplayPort, HDMI 1 Full & 2 Half mini card slots, Stereo headphone/Microphone combo jack
Wireless	Intel® Dual Back Wireless-AC 7260 802.11AC

	Wi-Fi + BT 4.0LE Half Mini Card
Mouse	Multi-touch Touchpad
Keyboard	Internal English Single Pointing Keyboard
Bluetooth	Intel Wireless Bluetooth 4.0LE
Battery	3-cell (31Whr) Lithium Ion battery with ExpressCharge
AC Adapter	65W AC Adapter, 3-pin
Camera/Microphone	Integrated Light Sensitive Webcam and Noise Cancelling Digital Array Mic
Accessories	• Dell mini-DP to VGA Adapter • Dell Sleeve – 12 inch Fits Latitude Ultrabooks
Weight	2.99lbs

Apple MacBook Air 13.3"

The Apple MacBook Air laptop is an ultra-light, portable device. The machine will come with the Mac OS X Mavericks Operating System.

Highlights

- Ultralight—can be brought to the classroom and plugged in to the audiovisual system using the included Mini DisplayPort to VGA Adapter (weighs 2.96lbs)
- Ultrathin design is beneficial for frequent travelers
- 256GB PCIe-based Flash Storage for high speed demanding operations
- Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions
- iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation

Trade-offs

- No internal optical drive. An external SuperDrive will **NOT** be provided
- No internal network port. A USB Ethernet adapter will be included

Technical Specifications	APPLE MACBOOK AIR 13"
Operating System	Mac OS X Mavericks
Processor	1.7GHz Dual-Core Intel Core i7 Processor (Turbo Boost up to 3.3GHz w/4MB Shared L3 cache)
Memory	8GB 1600MHz LPDDR3 SDRAM
Hard Disk	256GB Flash Storage
Optical Drive	NONE$^\Delta$
Audio	Built-in stereo speakers
Video Card	Intel HD Graphics 5000
Monitor	13.3" (diagonal) high-resolution LED-backlit glossy widescreen display (1440x900)
Warranty	3 Year AppleCare Protection Plan
Expansion	2 USB 3.0 ports[#] (up to 5Gbps),Thunderbolt port (up to 10Gbps), MagSafe 2 power port SDXC card slot
Wireless	802.11n Wi-Fi wireless networking
Mouse	Multi-Touch Track pad
Keyboard	Keyboard, English
Bluetooth	Bluetooth 4.0 wireless technology
Battery	Built-in 54-watt-hour Lithium-Polymer Battery

	(up to 12 hours wireless web)
AC Adapter	45W MagSafe 2 Power Adapter
Camera/Microphone	Built-in FaceTime HD camera & dual microphone
Accessories	• Apple Thunderbolt to Gigabit Ethernet Adapter • Mini DisplayPort to VGA Adapter • Sleeve
Weight	2.96lbs

FWI 2014 Workstation Configurations

	DELL OPTIPLEX 9020	DELL E7440	DELL E7240	APPLE iMAC	APPLE MACBOOK PRO w/RETINA DISPLAY	APPLE MACBOOK AIR
Configuration	All-in-One Desktop	Laptop	Laptop	All-in-One Desktop	Laptop	Laptop
Highlights	Quad core processor for data processing intensive activities 8GB of RAM for memory intensive activities 1TB hard drive for large storage needs Built-in camera for video calls and Blackboard Collaborate sessions 23 inch Integrated WLED Full HD All-in-One Display Less clutter due to all-in-one design	Portable—can be brought to the classroom and plugged in to the audiovisual system (weighs 3.6lbs) 8GB of RAM for memory intensive activities 256GB Mobility Solid State Drive for high speed demanding operations Integrated light sensitive camera for video calls and Blackboard Collaborate sessions	Ultralight—can be brought to the classroom and plugged in to the audiovisual system using the included Dell Mini DisplayPort to VGA Adapter (weighs 2.99lbs) Ultrathin design features a 12.5" HD display cleverly fit into a footprint that's similar to an 11" laptop, and it is beneficial for frequent travelers 256GB Mobility Solid State Drive for high speed demanding operations Built-in camera and microphone for video calls and Blackboard Collaborate sessions	Quad core processor for data processing intensive activities 1TB hard drive for large storage needs Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation 21.5 inch widescreen Less clutter and weight due to all-in-one and thin design	Portable—can be brought to the classroom and plugged in to the audiovisual system using the included Mini DisplayPort to VGA Adapter (weighs 3.46lbs) 256GB PCIe-based Flash Storage for high speed demanding operations Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation	Ultralight—can be brought to the classroom and plugged in to the audiovisual system using the included Mini DisplayPort to VGA Adapter (weighs 2.96lbs) Ultrathin design is beneficial for frequent travelers 256GB PCIe-based Flash Storage for high speed demanding operations Built-in FaceTime HD camera and microphone for video calls and Blackboard Collaborate sessions iLife software suite (iPhoto, Garageband, iMovie) for multimedia creation
Operating System	Windows 7, 64-bit	Windows 7, 64-bit	Windows 7, 64-bit	Mac OS X Mavericks	Mac OS X Mavericks	Mac OS X Mavericks
Processor	i7-4770S Processor (Quad Core HT, 3.10GHz Turbo, 8MB, w/ HD Graphics 4600)	4th gen Intel Core i5-4300U Processor (1.9GHz, 3M cache)	4th gen Intel Core i5-4300U Processor (1.9GHz, 3M cache)	2.7GHz Quad-core Intel Core i5, Turbo Boost up to 3.2GHz w/4MB L3 cache	2.4GHz Dual-core Intel Core i5 Processor (Turbo Boost up to 2.9GHz) w/3MB shared L3 cache	1.7GHz Dual-Core Intel Core i7, Turbo Boost up to 3.3GHz
Memory	8GB (1x8GB) 1600 MHz DDR3L Memory	8GB (1x8GB) 1600MHz DDR3L Memory	8GB (2x4GB) 1600MHz DDR3L Memory	8GB 1600MHz DDR3 SDRAM - 2X4GB	8GB 1600MHz DDR3L SDRAM	8GB 1600MHz LPDDR3 SDRAM
Hard Disk	1TB 3.5inch Serial ATA (7.200 RPM) Hard Drive	256GB Mobility Solid State Drive	256GB Mobility Solid State Drive	1TB Serial ATA Drive @ 5400 rpm	256GB PCIe-based Flash Storage	256GB Flash Storage
Optical Drive	8X Slimline DVD+/-RW	N/A	N/A	N/A	N/A	N/A
Audio	Internal Dell audio speaker	Built-in stereo speakers	Built-in stereo speakers	Stereo speakers Dual microphones Headphone port •Headphone/optical digital audio output (minijack) •Support for Apple iPhone headset with microphone	Stereo speakers Dual microphones	• Stereo speakers • Omnidirectional microphone • Headphone port • Support for Apple Earphones with Remote and Mic
Video Card	Intel® Integrated Graphics 4600	Intel Integrated HD 4400 Graphics	Intel Integrated HD 4400 Graphics	Intel Iris Pro Graphics	Intel Iris Graphics	Intel HD Graphics 5000
Monitor	23" Integrated WLED Full HD Standard Non Touch Screen (1920 x 1080 native resolution)	14.0 HD (1920x1080) Wide View Anti-Glare WLED-backlit	12.5" HD (1366x768) Anti-Glare WLED-backlit	21.5-inch (diagonal) LED-backlit display with IPS technology; 1920-by-1080 resolution with support for millions of colors	Retina display: 13.3" (diagonal) LED-backlit display with IPS technology; 2560-by-1600 resolution at 227 pixels per inch with support for millions of colors	13.3" (diagonal) high-resolution LED-backlit glossy widescreen display with support for millions of colors (1440x900 native res)
Warranty	3 Year ProSupport for IT and 3 Year NBD Onsite Service	3 Year ProSupport for IT and 3 Year NBD Onsite Service	3 Year ProSupport for IT and 3 Year NBD Onsite Service	3 Year AppleCare Protection Plan	3 Year AppleCare Protection Plan	3 Year AppleCare Protection
Expansion Slots	4 External USB 3.0 ports (2 side, 2 rear) and 4 External USB 2.0 ports 1 RJ-45 1 VGA 1 HDMI 2 PS/2 1 Line-in (stereo/microphone) 2 Line-out (1 side for headphone/1 rear for speaker)	Network connector (RJ-45) USB 3.0 (3) Stereo headphone/Microphone combo jack Docking Connector, mDisplayPort, HDMI 1 Full and 1 Half Mini Card Slots	Network connector (RJ-45) USB 3.0 (3) Stereo headphone/Microphone combo jack Docking Connector, mDisplayPort, HDMI 1 Full and 2 Half Mini Card Slots	SDXC card slot Four USB 3 ports Two Thunderbolt ports Mini DisplayPort output with support for DVI, VGA, and dual-link DVI 10/100/1000BASE-T Gigabit Ethernet (RJ-45 connector)	MagSafe 2 power port 2 Thunderbolt port (up to 20Gbps) Headphone port, HDMI port Two USB 3.0 ports (up to 5 Gbps) SDXC card slot	Two USB 3.0 ports (up to 5Gbps) Thunderbolt port (up to 10Gbps) MagSafe 2 power port SDXC card slot
Wireless	Intel® Wireless 6235 half mini-PCI3 WLAN	Intel® Dual Back Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0LE Half Mini Card	Intel® Dual Back Wireless-AC 7260 802.11AC Wi-Fi + BT 4.0LE Half Mini Card	802.11n Wi-Fi wireless networking;2 IEEE 802.11a/b/g compatible	Built-in AirPort Extreme 802.11n Wi-Fi networking; IEEE 802.11a/b/g compatible	802.11n Wi-Fi wireless networking;5 IEEE 802.11a/b/g compatible
Mouse	Dell MS111 USB Optical Mouse	Trackpad	Trackpad	Apple Mouse, Wireless	Multi-Touch trackpad	Touchpad
Keyboard	US English (QWERTY) Dell KB212-B QuietKey USB Keyboard Black	Internal English Dual Pointing Keyboard	Internal English Single Pointing Keyboard	Apple Keyboard with Numeric Keypad, Wired, English	Built-in Full-size Backlit Keyboard, English	Keyboard (English) & User's Guide

Bluetooth	Built-in Intel® Wireless Bluetooth card (802.11n)	Intel Wireless Bluetooth 4.0LE	Intel Wireless Bluetooth 4.0LE	Bluetooth 4.0 wireless technology	Bluetooth 4.0 wireless technology	Bluetooth 4.0 wireless technology
Battery	NONE	3-cell (34Whr) Lithium Ion battery with ExpressCharge	3-cell (31Whr) Lithium Ion battery with ExpressCharge	NONE	Built-in 71.8-watt-hour Lithium-Polymer Battery (up to 9 hours of wireless web)	• 54-watt-hour • Wireless web (Up to 12 hours) • Standby time (Up to 30 days)
AC Adapter	200W up to 90% Efficient PSU (80 PLUS Gold); ENERGY STAR 5.2 qualified, Active PFC	65W AC Adapter, 3-pin	65W AC Adapter, 3-pin	100-240V AC	60W MagSafe 2 Power Adapter, AC wall plug, and power cord	45W MagSafe Power Adapter, AC wall plug, and power cord
Camera/Microphone	Fixed 2.0 MP webcam with sliding door	Integrated Light Sensitive webcam and Noise Cancelling Digital Array Mic	Integrated Light Sensitive webcam and Noise Cancelling Digital Array Mic	FaceTime HD camera Simultaneously supports full native resolution on the built-in display and up to a 30-inch display (2560 by 1600 pixels) on an external display Support for extended desktop and video mirroring modes	Built-in 720p FaceTime HD camera	Built-in 720p FaceTime HD camera
Accessories	N/A	Dell mini-DP to VGA Adapter Dell Mainstream Slip Case - 14.0"	Dell mini-DP to VGA Adapter Dell Sleeve - 12" Fits Latitude & XPS Ultrabooks	N/A	• Incase 13" Neoprene Pro Sleeve for MacBook Air • Ethernet Adapter • Mini DisplayPort to VGA Adapter	• Incase 13" Neoprene Pro Sleeve for MacBook Air • Ethernet Adapter • Mini DisplayPort to VGA Adapter
Weight	Weight: 16.8 pounds (7.6 kg)	Weight: 3.6 pounds (1.63 kg)	Weight: 2.99 pounds (1.36 kg)	Weight: 12.5 pounds (5.68 kg)	Weight: 3.46 pounds (1.57 kg)	Weight: 2.96 pounds (1.35 kg)
Dimensions	Height: 15.2 inches (38.6 cm) Width: 22.6 inches (57.4 cm) Depth: 2.7 inches (6.8 cm)	Height: 0.8 inches (0.21 cm) Width: 13.2 inches (33.7 cm) Depth: 9.1 inches (23.2 cm)	Height: 0.79 inches (0.2 cm) Width: 12.2 inches (31.1 cm) Depth: 8.3 inches (21.1 cm)	Height: 17.7 inches (45.0 cm) Width: 20.8 inches (52.8 cm) Depth: 6.9 inches (17.5 cm)	Height: 0.71 inch (1.8 cm) Width: 12.35 inches (31.4 cm) Depth: 8.62 inches (21.9 cm)	Height: 0.11-0.68 inch (0.3-1.7 cm) Width: 12.8 inches (32.5 cm) Depth: 8.94 inches (22.7 cm)